

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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|----------------------------|---|--------------------------------|
| In re Application of:      | § |                                |
| Martha Gardner et. al.     | § | Group Art Unit: 2166           |
|                            | § |                                |
| Serial No.: 10/643,191     | § | Confirmation: 3700             |
|                            | § |                                |
| Filed: August 18, 2003     | § | Examiner: Ahluwalia, Navneet K |
|                            | § |                                |
| For: METHOD AND SYSTEM FOR | § | Atty. Docket: 134734-1/SWA     |
| ASSESSING AND OPTIMIZING   | § | GERD:0701                      |
| CRUDE SELECTION            | § |                                |

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| September 17, 2007   | /Tait R. Swanson/ |
| Date   | Tait R. Swanson   |

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Dear Sir:

The Appellants respectfully submit this Pre-Appeal Brief Request for Review concurrently with a Notice of Appeal. In view of the clear legal and factual errors set forth below, the Appellants respectfully request the Panel to withdraw all outstanding rejections.

In the Final Office Action mailed on July 20, 2007, the Examiner essentially reiterated the rejection formulated in the previous Office Action mailed on January 16, 2007. Specifically, the Examiner rejected claims 1-4 and 6-28 under 35 U.S.C. § 103(a) as being unpatentable over Phillips (US Patent No. 6,792,399 B1, hereinafter "Phillips") in view Henley (Patent No. EP1102187 A2, hereinafter "Henley"). Of these, claims 1, 11, 17, 23 and 25 are independent. These rejections are clearly improper and must be withdrawn.

***Improper Combination - Lack of Objective Evidence, Articulated Reasoning with Rational Underpinning, and Thorough and Searching Factual Inquiry as Required by KSR.***

As discussed on page 14 of the previous Response, the Examiner has not shown objective evidence of the requisite reason to modify or combine the cited references to reach the present claims. In addressing obviousness determinations under 35 U.S.C. § 103, the Supreme Court in *KSR International Co. v. Teleflex Inc.*, No. 04-1350 (April 30, 2007), did not diminish the requirement for objective evidence of obviousness. *KSR, slip op.* at 14 (“To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.”); see also, *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002) (holding that the factual inquiry whether to combine references must be thorough and searching, and that it must be based on *objective evidence of record*). In the present rejection, the Examiner combined the cited references based on the *conclusory and subjective statement* that “[i]t would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because Henly’s prediction of properties of and optimization of plant’s output of products in combination with the prediction models and risk analyzer of Phillips would result in accurate prediction of the crude oil blend to be used (paragraph 0004 and 0012, Henly).” Final Office Action, page 6. The Examiner did not provide any *objective evidence*, did not provide any *articulated reasoning with rational underpinning*, and did not provide a *thorough and searching* factual inquiry as required by *KSR*, as discussed above. In view of these clear factual and legal deficiencies, the Examiner’s rejection cannot support a *prima facie* case of obviousness of the present claims.

***Improper Combination – References Teach Different Principles of Operation.***

As discussed on pages 14-16 of the previous Response, the cited references teach contrastingly different intended purposes and principles of operation, which would change if the

cited references were hypothetically combined as suggested by the Examiner. The primary reference (Phillips) teaches a principle of operation of improved techniques for forecasting the values of variables, such as the price of a share of stock or a commodity, using clusterization. Specifically, the primary reference combines the predictions of stock prices by various people/analysts to provide an average prediction of the stock price, thereby improving the predicting of the stock price. *See* Phillips; col. 10, line 56 – col. 11, line 33; and col. 42, line 26 – col. 47, line 18. In contrast, the secondary reference (Henly) teaches a principle of operation of predicting a characteristic of a product to be prepared by a processing plant by means of regressive analysis of an accumulation of data relating to a number of measured properties of the incoming material, the process of the plant, and a number of characteristics of the product. *See id.* at page 16; paragraph 105. Henly does not teach an accumulation of predictions by people/analysts, as disclosed by Phillips, but rather Henly uses regressive analysis based on actual measured characteristics of the plant process and product. In view of these contrasting different principles of operation, the Examiner's proposed combination of the primary and secondary references is absolutely improper and cannot stand.

### ***Request Removal of Non-Analogous Art***

As discussed on pages 16-17 of the previous Response, the Phillips reference is non-analogous art, and must be withdrawn. In regard to the first step of the *Bott* test, the Phillips reference is directed to developing a technique for predicting a value of a financial and/or economic measure (e.g., shares of stock) that represents an aspect of an existing economic environment. Stock predictions are clearly not in the field of the Appellants endeavor. In regard to the second step of the *Bott* test, the Phillips reference is not pertinent to the problem addressed by the present patent application, which is directed to a technique for refining crude oil and assessing and optimizing crude selection to assist oil refineries in assessing and selecting crudes and crude blends that are not of optimum quality. Thus, there is no evidence whatsoever that similar problems exist in these disparate fields of art. Accordingly, the Phillips reference is believed to be non-analogous art. The Appellants respectfully request the removal of the Phillips reference from consideration. For at least these reasons, among others, the Appellants respectfully request withdrawal of the foregoing combination and the corresponding rejections under 35 U.S.C. § 103.

***Features of Independent Claims 1, 11, 17, 23 and 25 Missing from References***

As discussed on pages 17-19 of the previous Response, Appellants submit that independent claims 1, 11 and 17 recite similar language. For example, claim 1 recites “a database storing data comprising crude characteristic data related to a plurality of different crudes or crude blends” and a predictive engine “configured to assess similarity of the crude characteristic data and the crude processing data of the plurality of different crudes or crude blends with input crude characteristic data and input crude processing data of the respective crude or crude blend.” The cited references, taken alone or in hypothetical combination, fail to teach or suggest these claim features.

As discussed on pages 19-22 of the previous Response, Appellants submit that independent claims 23 and 25 recite similar language. For example, claim 23 recites a system comprising “a crude analyzer configured to compare a selected crude type and a selected refinery parameter with historical data comprising crude data related to a plurality of crude types and refinery data related to a plurality of refineries, wherein the crude analyzer is configured to identify one or more crude types and one or more refinery parameters in the historical data that are statistically similar to the selected crude type and the selected refinery parameter, respectively.” The cited references, taken alone or in hypothetical combination, fail to teach or suggest these claim features.

The primary Phillips reference does not teach or suggest the foregoing features. Appellants have carefully reviewed the sections (column 8, lines 12-21 and 31-41; column 9, lines 34-44 and column 56, lines 47-56) referenced by the Examiner and submit that the technique for providing combination forecasts as taught by Phillips is not equivalent or even similar to features recited by the present claims. The secondary reference of Henly fails to obviate the deficiencies in the teachings of Phillips. Henly discloses a process for the prediction and the optimization of the output of a plant producing products from incoming materials. Appellants have carefully reviewed the sections (paragraph 0004 and 0012) referenced by the Examiner and submit that these sections fail to disclose the recited claim features. Instead, these sections relate to a process and method for the prediction of the properties of and the optimization of a plant's output of products from a source or sources of raw material.

In view of these deficiencies, among others, the Appellants submit that the independent claims 1, 11, 17, 23 and 25 are non-obvious over Phillips or Henly, taken either alone or in hypothetical combination. For these reasons, among others, the Appellants respectfully request withdrawal of the foregoing rejections under 35 U.S.C. § 103 in view of Phillips and Henly.

***Dependent claims 2, 12 and 18.***

As discussed on pages 22-24 of the previous Response, Appellants submit that dependent claims 2, 12 and 18 recite, in generally similar language, that the predictive engine takes as input crude information corresponding to at least one crude slate and at least one refinery operating parameter and/or condition and uses desirability metrics to assess similarity of the input to data in the database. Appellants have carefully reviewed the sections referenced by the Examiner and submit that these sections fail to disclose the foregoing features. For at least these reasons, among others, the Appellants respectfully request withdrawal of the foregoing rejections under 35 U.S.C. § 103.

Respectfully submitted,

Date: September 17, 2007

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